10/814,195
LV Cook 5/10/05

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     (FILE 'HOME' ENTERED AT 12:33:47 ON 10 MAY 2005)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT' ENTERED AT 12:34:08 ON
     10 MAY 2005
L1             0 S PHOSPHOCOLINE? AND PHOSPHORYCHOLINE?
L2            38 S PHOSPHOCOLINE?
L3           117 S PHOSPHORYCHOLINE?
L4        139290 S PHOSPHATIDYLCHOLINE?
L5             0 S LYSOPHOSHAYIDYLCHOLINE
L6         19895 S LYSOPHOSPHATIDYLCHOLINE?
L7             0 S L2 AND ANTIBOD?
L8            38 S L3 AND ANTIBOD?
L9            38 S L3 AND ANTIBOD?
L10         4651 S L4 AND ANTIBOD?
L11          675 S L6 AND ANTIBOD?
L12           31 DUPLICATE REMOVE L8 (7 DUPLICATES REMOVED)
L13           31 DUPLICATE REMOVE L9 (7 DUPLICATES REMOVED)
L14         2390 DUPLICATE REMOVE L10 (2261 DUPLICATES REMOVED)
L15          340 DUPLICATE REMOVE L11 (335 DUPLICATES REMOVED)
L16            0 S L13 AND PAF?
L17            0 S L12 AND KIT?
L18           31 S L12 AND L13
L19            1 S L18 AND CARDIO?
L20            1 S L18 AND ATHEROSCLEROSIS?
L21            0 S L3 AND ARTHEROSCLEROSIS?
L22            1 S L3 AND L6
L23          465 S L4 AND HYPERTENSION?
L24           94 S L6 AND HYPERTENSION?
L25            0 S L23 AND BLODD?
L26          259 S L23 AND BLOOD?
L27           50 S L24 AND BLOOD?
L28          202 DUPLICATE REMOVE L26 (57 DUPLICATES REMOVED)
L29           39 DUPLICATE REMOVE L27 (11 DUPLICATES REMOVED)

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     (FILE 'HOME' ENTERED AT 12:33:47 ON 10 MAY 2005)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT' ENTERED AT 12:34:08 ON
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L1            0 S PHOSPHOCOLINE? AND PHOSPHORYCHOLINE?
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L14        2390 DUPLICATE REMOVE L10 (2261 DUPLICATES REMOVED)
L15         340 DUPLICATE REMOVE L11 (335 DUPLICATES REMOVED)
L16           0 S L13 AND PAF?
L17           0 S L12 AND KIT?
L18          31 S L12 AND L13
L19           1 S L18 AND CARDIO?
L20           1 S L18 AND ATHEROSCLEROSIS?
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L22           1 S L3 AND L6
L23         465 S L4 AND HYPERTENSION?
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FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT' ENTERED AT 12:34:08 ON 10 MAY 2005

L1	0	S	PHOSPHOCOLINE? AND PHOSPHORYCHOLINE?
L2	38	S	PHOSPHOCOLINE?
L3	117	S	PHOSPHORYCHOLINE?
L4	139290	S	PHOSPHATIDYLCHOLINE?
L5	0	S	LYSOPHOSHAYIDYLCHOLINE
L6	19895	S	LYSOPHOSPHATIDYLCHOLINE?
L7	0	S	L2 AND ANTIBOD?
L8	38	S	L3 AND ANTIBOD?
L9	38	S	L3 AND ANTIBOD?
L10	4651	S	L4 AND ANTIBOD?
L11	675	S	L6 AND ANTIBOD?
L12	31	DUPLICATE REMOVE	L8 (7 DUPLICATES REMOVED)
L13	31	DUPLICATE REMOVE	L9 (7 DUPLICATES REMOVED)
L14	2390	DUPLICATE REMOVE	L10 (2261 DUPLICATES REMOVED)
L15	340	DUPLICATE REMOVE	L11 (335 DUPLICATES REMOVED)
L16	0	S	L13 AND PAF?
L17	0	S	L12 AND KIT?
L18	31	S	L12 AND L13
L19	1	S	L18 AND CARDIO?
L20	1	S	L18 AND ATHEROSCLEROSIS?
L21	0	S	L3 AND ARTHEROSCLEROSIS?
L22	1	S	L3 AND L6
L23	465	S	L4 AND HYPERTENSION?
L24	94	S	L6 AND HYPERTENSION?
L25	0	S	L23 AND BLODD?
L26	259	S	L23 AND BLOOD?
L27	50	S	L24 AND BLOOD?
L28	202	DUPLICATE REMOVE	L26 (57 DUPLICATES REMOVED)
L29	39	DUPLICATE REMOVE	L27 (11 DUPLICATES REMOVED)
L30	3	S	L28 AND KIT?

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d his

     (FILE 'HOME' ENTERED AT 15:12:21 ON 10 MAY 2005)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
     15:12:40 ON 10 MAY 2005
L1         44219 S (PLATELET ACTIVATING FACTOR)
L2             0 S L1 AND ATHROSCLER?
L3           807 S L1 AND ATHEROSC?
L4          1245 S L1 AND PHOSPHORYLCHOLINE?
L5          1245 S L1 AND PHOSPHORYLCHOLINE?
L6          2675 S L1 AND PHOSPHOCHOLINE?
L7           130 S L5 AND L6
L8          1425 S L1 AND PHOSPHATIDYLCHOLINE?
L9           908 S L1 AND LYSOPHOSPHATIDYLCHOLINE?
L10          262 S L8 AND L9
L11            2 S L10 AND L7
L12            2 DUPLICATE REMOVE L11 (0 DUPLICATES REMOVED)
L13            1 S L7 AND REVIEW?
L14            0 S L10 AND REVIEW?
L15           29 S L10 AND ASSAY?
L16           16 DUPLICATE REMOVE L15 (13 DUPLICATES REMOVED)
L17           82 S L3 AND L8
L18           97 S L3 AND L9
L19          101 S L4 AND L8
L20          106 S L4 AND L9
L21           14 S L19 AND L6
L22           10 S L20 AND L6
L23           14 DUPLICATE REMOVE L21 (0 DUPLICATES REMOVED)
L24           10 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)
L25            2 S L23 AND L24

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ANSWER 3 OF 14 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
AN 1998195672 EMBASE
TI Metabolic fate of **platelet-activating factor** (PAF, 1-O-alkyl-2-acetyl- sn-glycero-3-**phosphocholine**) and lyso-PAF (1-O-alkyl-2-lyso-sn-glycero-3- **phosphocholine**) in FRTL5 cells.
AU Botitsi E.; Mavri-Vavayanni M.; Siafaka-Kapadai A.
CS A. Siafaka-Kapadai, Dept. of Chemistry (Biochemistry), University of Athens, Zografou, 15771 Athens, Greece
SO Journal of Lipid Research, (1998) Vol. 39, No. 6, pp. 1295-1304.
Refs: 47
ISSN: 0022-2275 CODEN: JLPRAW
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 19980716
Last Updated on STN: 19980716
AB The metabolism of **platelet-activating factor** (PAF, 1-O-alkyl-2-acetyl- sn-glycero-3-**phosphocholine**) and lyso-PAF (1-O-alkyl-2-lyso-sn-glycero-3- **phosphocholine**) was investigated in FRTL5 cells, a normal rat thyroid cell line. FRTL5 cells incorporated [3H]PAF and deacetylated this compound to the corresponding [3H]lyso-PAF which was not accumulated or secreted but converted mainly to alkyl-acyl-**phosphocholine** indicating that this acylation process was particularly active in these cells. Among metabolic products of both [3H]PAF and [3H]lyso-PAF were alkylglycerol as well as its mono- and diacyl derivatives. [3H]alkylglycerol could be the intermediate compound for the production of [3H]alkyl- and [3H]alkenyl-phosphoethanolamine (plasmalogen) which were also metabolic products. FRTL5 cells were able to convert lyso-PAF to PAF especially when they were stimulated by ionophore A23187 in the presence of [3H]lyso-PAF and phenytmethylsulfonyl fluoride. The amount of PAF increased for the first 30 min and declined thereafter. PAF resting levels were found low in the same cells. Furthermore, PAF- acetylhydrolase activity was determined in cell homogenates. The presence of metabolic products such as alkyl-**phosphatidylcholine**, alkyl- and alkenyl- phosphatidylethanolamine and alkyl-glycerol, as well as, its mono- and diacyl derivatives, indicates that FRTL5 cells and probably other thyroid cells, are very active in metabolizing PAF and lyso-PAF and suggests the cooperation of the corresponding metabolic pathways in these cells.
CT Medical Descriptors:
*phospholipid metabolism
phospholipid synthesis
enzyme activity
cell labeling
bioassay
thyroid function
nonhuman
rat
controlled study
animal cell
article
priority journal
Drug Descriptors:
*thrombocyte activating factor: EC, endogenous compound
1 o alkylglycero 3 phosphorylcholine: EC, endogenous compound
plasmalogen: EC, endogenous compound
RN (thrombocyte activating factor) 64176-80-3, 65154-06-5; (1 o alkylglycero 3 **phosphorylcholine**) 74430-89-0

ANSWER 16 OF 16 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6

AN 92032646 EMBASE
DN 1992032646
TI A specific, sensitive and high-capacity immunoassay for PAF.
AU Baldo B.A.; Smal M.A.; McCaskill A.C.
CS Kolling Inst./Medical Research, Royal North Shore Hospital,St. Leonards, NSW 2065, Australia
SO Lipids, (1991) Vol. 26, No. 12, pp. 1136-1139.
ISSN: 0024-4201 CODEN: LPDSAP
CY United States
DT Journal; Conference Article
FS 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 920320
Last Updated on STN: 920320
AB A specific radioimmunoassay for **platelet-activating factor** (PAF) sensitive in the range 10-1000 pg (0.02-2 pmoles) has been developed. Detailed quantitative hapten inhibition studies showed specificity for the acetyl group at C-2 of PAF, a requirement for the ether linkage at C-1 and some tolerance for substituents on the choline nitrogen. No significant cross- reactivity was found with **phosphatidylcholine** and **lysophosphatidylcholine** or with lysoPAF.
CT Medical Descriptors:
*radioimmunoassay
*thrombocyte activation
conference paper
cross reaction
degranulation
intermethod comparison
intramuscular drug administration
nonhuman
priority journal
radioreceptor assay
sheep
standardization
structure activity relation
technique
thrombocyte aggregation
Drug Descriptors:
*thrombocyte activating factor: EC, endogenous compound
*thrombocyte activating factor derivative
RN (thrombocyte activating factor) 64176-80-3, 65154-06-5

ANSWER 16 OF 16 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6

AN 92032646 EMBASE
DN 1992032646
TI A specific, sensitive and high-capacity immunoassay for PAF.
AU Baldo B.A.; Smal M.A.; McCaskill A.C.
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SO Lipids, (1991) Vol. 26, No. 12, pp. 1136-1139.
ISSN: 0024-4201 CODEN: LPDSAP
CY United States
DT Journal; Conference Article
FS 026 Immunology, Serology and Transplantation
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LA English
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ED Entered STN: 920320
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AB A specific radioimmunoassay for **platelet-activating factor** (PAF) sensitive in the range 10-1000 pg (0.02-2 pmoles) has been developed. Detailed quantitative hapten inhibition studies showed specificity for the acetyl group at C-2 of PAF, a requirement for the ether linkage at C-1 and some tolerance for substituents on the choline nitrogen. No significant cross- reactivity was found with **phosphatidylcholine** and **lysophosphatidylcholine** or with lysoPAF.
CT Medical Descriptors:
*radioimmunoassay
*thrombocyte activation
conference paper
cross reaction
degranulation
intermethod comparison
intramuscular drug administration
nonhuman
priority journal
radioreceptor assay
sheep
standardization
structure activity relation
technique
thrombocyte aggregation
Drug Descriptors:
*thrombocyte activating factor: EC, endogenous compound
*thrombocyte activating factor derivative
RN (thrombocyte activating factor) 64176-80-3, 65154-06-5

ANSWER 12 OF 16 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 3

AN 1998:477824 BIOSIS

DN PREV199800477824

TI MgATP has different inhibitory effects on the use of 1-acyl-**lysophosphatidylcholine** and lyso **platelet-activating factor** acceptors by neuronal nuclear acetyltransferase activities.

AU Baker, R. Roy [Reprint author]; Chang, Huu-Yi

CS Div. Neurol., Dep. Med., Clin. Sci. Div., Rm. 6368, Med. Sci. Build., Univ. Toronto, Toronto, ON M5S 1A8, Canada

SO Biochimica et Biophysica Acta, (June 15, 1998) Vol. 1392, No. 2-3, pp. 351-360. print.
CODEN: BBACAQ. ISSN: 0006-3002.

DT Article

LA English

ED Entered STN: 5 Nov 1998
Last Updated on STN: 5 Nov 1998

AB The inhibitory effects of MgATP on neuronal nuclear acetyltransferase activities were studied using lyso **platelet-activating factor** (lyso-PAF, 1-alkyl-sn-glycero-3-phosphocholine) and **lysophosphatidylcholine** (lyso-PC, 1-acyl-sn-glycero-3-phosphocholine). The nuclear (N1) acetylation of lyso-PC was more profoundly inhibited by MgATP. MgATP did not alter the apparent Km for acetyl-CoA in either acetylation reaction. The inhibitory effects of MgATP were not seen for other nucleotides or MgAMP-PCP. Kinase inhibitors such as staurosporine (1 muM), chelerythrine, and R59022 (diglyceride kinase inhibitor 1) did not block the MgATP inhibition of either acetylation. However, the addition of phospholipids to the **assays** indicated a selective inhibitory effect for PIP (25-50 muM) in the nuclear acetylation of lyso-PAF. When N1 was incubated with (gamma-33P)ATP, phosphatidic acid and PIP were the principal radioactive lipid products. While the extent of MgATP inhibition of lyso-PAF acetylation was similar at different concentrations of lyso-PAF, increasing lyso-PC concentrations greatly decreased the MgATP inhibition seen in lyso-PC acetylations. Nuclear envelopes prepared in the presence of PMSF, and fraction N1 exposed to PMSF, did not show the inhibitory effect of MgATP on lyso-PC acetylation. PMSF (an inhibitor of certain phospholipase and lysophospholipase activities) did not reduce the MgATP inhibition of lyso-PAF acetylation. Arachidonoyl trifluoromethylketone, an inhibitor of cytosolic phospholipases A2 and of lysophospholipase activity associated with cPLA2, also blocked the inhibitory effect of MgATP on lyso-PC acetylation. Using radioactive lyso-PC substrate, fraction N1 produced labeled free fatty acid and **phosphatidylcholine**. In the presence of acetyl-CoA, the production of radioactive **phosphatidylcholine** increased almost 6-fold when MgATP was also included in these incubations. In the presence of MgATP and acetyl-CoA, PMSF reduced the levels of radioactive free fatty acid and **phosphatidylcholine** derived from lyso-PC, while Triacsin C, an inhibitor of acyl CoA synthetase, decreased **phosphatidylcholine** labeling. These findings suggest that MgATP inhibition of lyso-PC acetylation results from a loss of lyso-PC substrate that is largely mediated by nuclear lysophospholipase, acyl-CoA synthetase and lyso-PC acylation. Thus the neuronal nuclear production of Acyl PAF may be regulated by paths that compete for the lyso-PC substrate. In contrast, the acetylation of lyso-PAF is inhibited by PIP, a product of nuclear PI kinase reactions.

CC Enzymes - General and comparative studies: coenzymes 10802
Biochemistry methods - General 10050
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Methods and

Techniques

IT Chemicals & Biochemicals

acetyltransferase: analysis, neuronal nuclear activity; arachidonoyl trifluoromethylketone: enzyme inhibitor; lyso-**platelet activating factor**: Cayman, enzyme substrate, Doosan-Serdary; magnesium-ATP: analysis, inhibitory effects; **phosphatidylcholine**: Doosan-Serdary; triacsin C: enzyme inhibitor; 1-acyl-**lysophosphatidylcholine**

IT Methods & Equipment

enzyme activity **assay**: activity **assays**, analytical method; lysophosphocholine metabolism **assay**: analysis/characterization techniques: CB, analytical method; neuronal nuclear fraction isolation: cell isolation method, isolation/purification techniques: CT

ORGN Classifier

Leporidae 86040

Super Taxa

Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

rabbit

Taxa Notes

Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

RN 9012-30-0 (acetyltransferase)

52691-62-0Q (lyso-**platelet activating factor**)

74430-89-0Q (lyso-**platelet activating factor**)

108728-68-3Q (lyso-**platelet activating factor**)

1476-84-2 (magnesium-ATP)

76896-80-5 (triacsin C)

Techniques

IT Chemicals & Biochemicals
acetyltransferase: analysis, neuronal nuclear activity; arachidonoyl trifluoromethylketone: enzyme inhibitor; lyso-**platelet activating factor**: Cayman, enzyme substrate, Doosan-Serdary; magnesium-ATP: analysis, inhibitory effects; **phosphatidylcholine**: Doosan-Serdary; triacsin C: enzyme inhibitor; 1-acyl-**lysophosphatidylcholine**

IT Methods & Equipment
enzyme activity **assay**: activity **assays**, analytical method; lysophosphocholine metabolism **assay**: analysis/characterization techniques: CB, analytical method; neuronal nuclear fraction isolation: cell isolation method, isolation/purification techniques: CT

ORGN Classifier
Leporidae 86040

Super Taxa
Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia

Organism Name
rabbit

Taxa Notes
Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

RN 9012-30-0 (acetyltransferase)
52691-62-0Q (lyso-**platelet activating factor**)
74430-89-0Q (lyso-**platelet activating factor**)
108728-68-3Q (lyso-**platelet activating factor**)
1476-84-2 (magnesium-ATP)
76896-80-5 (triacsin C)

ANSWER 3 OF 14 EMBASE
on STN

AN 1998195672 EMBASE

TI Metabolic fate of **platelet-activating factor** (PAF, 1-O-alkyl-2-acetyl- sn-glycero-3-**phosphocholine**) and lyso-PAF (1-O-alkyl-2-lyso-sn-glycero-3- **phosphocholine**) in FRTL5 cells.

AU Botitsi E.; Mavri-Vavayanni M.; Siafaka-Kapadai A.

CS A. Siafaka-Kapadai, Dept. of Chemistry (Biochemistry), University of Athens, Zografou, 15771 Athens, Greece

SO Journal of Lipid Research, (1998) Vol. 39, No. 6, pp. 1295-1304.
Refs: 47
ISSN: 0022-2275 CODEN: JLPRAW

CY United States

DT Journal; Article

FS 029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 19980716
Last Updated on STN: 19980716

AB The metabolism of **platelet-activating factor** (PAF, 1-O-alkyl-2-acetyl- sn-glycero-3-**phosphocholine**) and lyso-PAF (1-O-alkyl-2-lyso-sn-glycero-3- **phosphocholine**) was investigated in FRTL5 cells, a normal rat thyroid cell line. FRTL5 cells incorporated [3H]PAF and deacetylated this compound to the corresponding [3H]lyso-PAF which was not accumulated or secreted but converted mainly to alkyl-acyl-**phosphocholine** indicating that this acylation process was particularly active in these cells. Among metabolic products of both [3H]PAF and [3H]lyso-PAF were alkylglycerol as well as its mono- and diacyl derivatives. [3H]alkylglycerol could be the intermediate compound for the production of [3H]alkyl- and [3H]alkenyl-phosphoethanolamine (plasmalogen) which were also metabolic products. FRTL5 cells were able to convert lyso-PAF to PAF especially when they were stimulated by ionophore A23187 in the presence of [3H]lyso-PAF and phenytmethylsulfonyl fluoride. The amount of PAF increased for the first 30 min and declined thereafter. PAF resting levels were found low in the same cells. Furthermore, PAF- acetylhydrolase activity was determined in cell homogenates. The presence of metabolic products such as alkyl-**phosphatidylcholine**, alkyl- and alkenyl- phosphatidylethanolamine and alkyl-glycerol, as well as, its mono- and diacyl derivatives, indicates that FRTL5 cells and probably other thyroid cells, are very active in metabolizing PAF and lyso-PAF and suggests the cooperation of the corresponding metabolic pathways in these cells.

CT Medical Descriptors:
*phospholipid metabolism
phospholipid synthesis
enzyme activity
cell labeling
bioassay
thyroid function
nonhuman
rat
controlled study
animal cell
article
priority journal
Drug Descriptors:
*thrombocyte activating factor: EC, endogenous compound
***1 o alkylglycero 3 phosphorylcholine: EC, endogenous compound**
plasmalogen: EC, endogenous compound

RN (thrombocyte activating factor) 64176-80-3, 65154-06-5; (1 o alkylglycero 3 **phosphorylcholine**) 74430-89-0

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L21           14 S L19 AND L6
L22           10 S L20 AND L6
L23           14 DUPLICATE REMOVE L21 (0 DUPLICATES REMOVED)
L24           10 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)
L25            2 S L23 AND L24

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L29	39	DUPLICATE REMOVE	L27 (11 DUPLICATES REMOVED)
L30	3	S	L28 AND KIT?

ANSWER 12 OF 16 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 3

AN 1998:477824 BIOSIS

DN PREV199800477824

TI MgATP has different inhibitory effects on the use of 1-acyl-**lysophosphatidylcholine** and lyso **platelet-activating factor** acceptors by neuronal nuclear acetyltransferase activities.

AU Baker, R. Roy [Reprint author]; Chang, Huu-Yi

CS Div. Neurol., Dep. Med., Clin. Sci. Div., Rm. 6368, Med. Sci. Build., Univ. Toronto, Toronto, ON M5S 1A8, Canada

SO Biochimica et Biophysica Acta, (June 15, 1998) Vol. 1392, No. 2-3, pp. 351-360. print.
CODEN: BBACAQ. ISSN: 0006-3002.

DT Article

LA English

ED Entered STN: 5 Nov 1998
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AB The inhibitory effects of MgATP on neuronal nuclear acetyltransferase activities were studied using lyso **platelet-activating factor** (lyso-PAF, 1-alkyl-sn-glycero-3-phosphocholine) and **lysophosphatidylcholine** (lyso-PC, 1-acyl-sn-glycero-3-phosphocholine). The nuclear (N1) acetylation of lyso-PC was more profoundly inhibited by MgATP. MgATP did not alter the apparent Km for acetyl-CoA in either acetylation reaction. The inhibitory effects of MgATP were not seen for other nucleotides or MgAMP-PCP. Kinase inhibitors such as staurosporine (1 muM), chelerythrine, and R59022 (diglyceride kinase inhibitor 1) did not block the MgATP inhibition of either acetylation. However, the addition of phospholipids to the **assays** indicated a selective inhibitory effect for PIP (25-50 muM) in the nuclear acetylation of lyso-PAF. When N1 was incubated with (gamma-33P)ATP, phosphatidic acid and PIP were the principal radioactive lipid products. While the extent of MgATP inhibition of lyso-PAF acetylation was similar at different concentrations of lyso-PAF, increasing lyso-PC concentrations greatly decreased the MgATP inhibition seen in lyso-PC acetylations. Nuclear envelopes prepared in the presence of PMSF, and fraction N1 exposed to PMSF, did not show the inhibitory effect of MgATP on lyso-PC acetylation. PMSF (an inhibitor of certain phospholipase and lysophospholipase activities) did not reduce the MgATP inhibition of lyso-PAF acetylation. Arachidonoyl trifluoromethylketone, an inhibitor of cytosolic phospholipases A2 and of lysophospholipase activity associated with cPLA2, also blocked the inhibitory effect of MgATP on lyso-PC acetylation. Using radioactive lyso-PC substrate, fraction N1 produced labeled free fatty acid and **phosphatidylcholine**. In the presence of acetyl-CoA, the production of radioactive **phosphatidylcholine** increased almost 6-fold when MgATP was also included in these incubations. In the presence of MgATP and acetyl-CoA, PMSF reduced the levels of radioactive free fatty acid and **phosphatidylcholine** derived from lyso-PC, while Triacsin C, an inhibitor of acyl CoA synthetase, decreased **phosphatidylcholine** labeling. These findings suggest that MgATP inhibition of lyso-PC acetylation results from a loss of lyso-PC substrate that is largely mediated by nuclear lysophospholipase, acyl-CoA synthetase and lyso-PC acylation. Thus the neuronal nuclear production of Acyl PAF may be regulated by paths that compete for the lyso-PC substrate. In contrast, the acetylation of lyso-PAF is inhibited by PIP, a product of nuclear PI kinase reactions.

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Biophysics - Molecular properties and macromolecules 10506

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Methods and